Australian Pipit *(Anthus novae-seelandiae)*.—Confined to the very limited suitable habitat.

Australian Raven *(Corvus coronoides)*.—Well-distributed.

Grey Currawong *(Strepera versicolor)*.—Infrequent. Noted in forest towards Bailup.

Grey Butcher-bird *(Craeticus torquatus)*.—Only occasionally heard and rarely seen.

Western Magpie *(Gymnorhina dorsalis)*.—Several colonies in the locality. Throughout the three years that I was in the district, there were three old, wire nests in a dead road-side tree. The tree — ring-barked — had obviously been dead for at least two years when I first saw it, but it seems safe to conclude that the nests were built by Magpies while the tree was still living. A colony of magpies holds territory in the area still. Sticks would appear to have been much more easily obtainable than wire. The three nests in the one tree seem to suggest that one particular bird favoured wire as a building material.

On August 5, 1951, with my son, Lindsay, I watched a young bird with a waxed paper cup of the sort used in railway refreshment rooms. When we first saw the bird it was flying up to a height of about ten feet with the cup held in its bill, hovering, and then descending with the cup under its feet. This was repeated about ten times while we watched. There was no obvious motive for the behaviour.

ARCTIC TERNS ON THE SWAN RIVER

By G. M. STORR, Floreat Park.

The Arctic Tern *(Sterna macrura* — synonyms *paradisaea* and *antistropha)* breeds in the northern part of the Holarctic Region and has been long known to spend the southern summer in Antarctic seas. Except from the Atlantic and eastern Pacific Oceans there have been few records of the species in migration, and until recently none from Australian seas. It seemed that the species did not approach either the west or east coasts of the continent during its migration.

However, in 1950 biologists of the A.N.A.R.E. discovered that the Arctic Tern used both Heard and Macquarie Islands as a resting place (Downes, 1952). Subsequently W. B. Hitchcock (1952), of the National Museum, Melbourne, reidentified a battered tern collected by F. L. Whitlock on October 26, 1927, at Bunbury, as *Sterna macrura*. This record led Downes to conjecture that the species might use Indian Ocean and West Pacific routes more frequently than the few records suggested (*macrura* had been taken in New Zealand), and that the paucity of records of *macrura* was owing to its being confused with similar species of terns.

Last year D. G. Morgan (1954) found a storm-killed *macrura* in southern Victoria — the second Australian record.

On October 4, 1955, the writer observed at close range an Arctic Tern resting on the spit at Pelican Point, Crawley, among a mixed flock of Crested, Caspian and Fairy Terns. Four days later another

macrura was seen there; it was not the same individual as before, this bird's breast appearing white, while the previous one's was pale grey. On October 10 there were two of them on the spit at Pelican Point, one with a white, the other with a grey breast; the latter was collected, for at this stage I was still uncertain whether the species was *hirundo* or *macrura* (as it turned out to be). Details of the specimen are as follow.

Forehead white, speckled with black, especially near bill. Nape, crown and sides of head to just below and in front of eye dull black. Hind-neck white. Back pale grey. Upper tail-coverts and tail white, except for dark grey outer webs of outermost rectrices. Wing-coverts grey. Primaries: outer webs dark grey (almost black in outermost). Shafts white, inner webs narrowly (becoming wider in inner primaries) grey against shaft, remainder of inner webs white except for dark grey ends of feathers. Under wing-coverts white. Chin white. Throat, breast, and belly grey. Under tail-coverts white.

Bill black. Gape and tongue orange-red. Mouth salmon-pink. Iris very dark brown. Legs and toes black, except at joints where scales were worn and reddish. Soles of feet orange brown. Webs: upper surface dark grey, lower reddish grey.

Weight 129 g. Length 320 mm. Exposed Culmen 32. Wing 263 (primaries abraded). Tail 113 (measured along outer rectrices, both of which are very abraded). Tarsus 16. Middle toe (including claw) 22.

The bird was a male with very small gonads. Skull ossified. Considerable amount of subcutaneous and peritoneal fat. Stomach contents: remains of fish.

Of course not all the characters described above are discernible in the field. The following features were noted at close range with field glasses.

At rest: intermediate in size between Crested and Fairy Tern; head black except for extensive white forehead; hind neck white; black pale grey; tail white; wings very long, extending well past tail, and grey (not so dark as Crested Tern's but darker than Caspian's); breast pale grey or white; bill black; legs blackish and *very short*. In flight, the tail is deeply forked when not fanned; the under wing appears whitish except for dark "trailing edge" (this was subsequently found due to the dark tips of the primaries); in the upper wing the primaries appear dark grey, the secondaries pale grey.

Occasionally when flushed the terns uttered a low, soft, harsh, drawn-out "kirk" with downward inflection. Their flight was easy and graceful, the wings beating through a wide arc. When leaving the area they usually flew at considerable height, and, though sometimes watched for several minutes, were never seen to dive or search for food. This contrasted with the behaviour of the local species, especially the Fairy Tern, which when flushed almost immediately begin to search for prey.

Let us return to the problem posed by the paucity of Australian records, which is unexpected in view of the species' circum-Antarctic distribution in the southern summer. There seem to be three possible explanations for it.

First there is Downes' suggestion that the species has been misidentified in the field. This could easily be so, especially when we remember that the Bunbury specimen was misidentified in the hand. Overlooking of Arctic Terns is particularly likely in south-

eastern Australia where a similar species, *Sterna striata*, is a regular visitor from New Zealand. Moreover in the same area another species, *Sterna hirundo*, has been recently found to be a rare visitor from the Northern Hemisphere. All writers with experience of the two species emphasize the difficulty in distinguishing between *macrura* and *hirundo* in eclipse plumage.

In Western Australia *macrura* should not be so easily confused with other species of this group — medium-sized terns with white caps and long, deeply forked tails. For *striata* does not visit this State nor, as far as we know, does *hirundo* (but as it is a common winter visitor to the Malayo-Papuan Archipelago, we should not be surprised if some birds straggled down the Western Australian coast). Another similar species, the Roseate Tern *(S. dougalli)* is extremely rare south of the Abrolhos. There is a chance that individuals have been carelessly dismissed as Marsh Terns (as I nearly did in this instance).

Then the species may be oceanic in these latitudes, which would seem to be supported by the fact that the first two specimens taken in Australia were apparently blown on to land by storms. But against this we must count the presence of at least two individuals in sheltered waters for a week, six miles from the sea.

Thirdly, we must consider the great extent of the Australian coastline and the high average speed at which sea-birds are known to migrate. It follows that at any one place on our coast the chances are against our seeing the species during the short period it spends in our waters. At Heard and Macquarie Islands the position is different, though there, too, the birds are only passage migrants. These islands, surrounded by hundreds of miles of ocean, probably "trap" for a while all terns that pass within sight of them.

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FROM FIELD AND STUDY

Whimbrel on Rottnest in Winter.—On June 22, 1955 we saw a solitary Whimbrel *(Numenius phaeopus)* on the headland at Cape Vlaming, Rottnest Island.

—G. M. DUNNET and L. MACLEAN, Nedlands.

A large flock of Little Eagles.—In the early morning of April 9, 1955, seventeen Little Eagles (an unusually large number for this district) were observed together at Lake Dumbleyung, a stronghold of the Whistling Eagle. They were feeding on a fox that I had shot the previous evening. This was the first occasion that I had seen Little Eagles eating food they had not captured themselves. During the meal five Whistling Eagles looked on from nearby trees.

—R. A. AITKEN, Dumbleyung.